Riara School of Business

Nurturing business innovators

JANUARY - APRIL 2024 TRIMESTER EXAMINATIONS
EXAMINATION FOR DIPLOMA IN BUSINESS ADMINISTRATION (FINANCE)
RBM 016: STATISTICS AND DATA ANALYSIS

DATE: APRIL 2024 **TIME: 2 HOURS**

GENERAL INSTRUCTIONS:

Students are NOT permitted to write on the examination paper during reading time.
This is a closed book examination. Text book/Reference books/notes are not permitted.

SPECIAL INSTRUCTIONS:

1 Write your REGISTRATION NO. Clearly on the answer booklet(s).

2 Answer Question One and ANY other TWO questions.
3 Questions in all sections should be answered in answer booklet(s).

4 Marks allocated to each question are shown at the end of the question.

5 PLEASE start the answer to EACH question on a NEW PAGE.

6 For the questions, write the number of the question on the answer booklet(s) in the order you answered them.

7 Show your workings and clearly indicate the answer to the problems provided.

8 Keep your phone(s) SWITCHED OFF at the front of the examination room.

9 Keep ALL bags and caps at the front of the examination room and do not refer to any unauthorized material before or during the course of the examination.

10 You are only allowed to leave the examination room 30minutes to the end of the Examination.

QUESTION ONE: COMPULSORY (30 MARKS)

a) A class has 25 students who took a statistics test. Amongst them, 10 students had an average score of 80, while other students had an average score of 60. Determine the average score of the whole class. (5 Marks)

b) Find the median of following series-

5, 7, 6, 1, 8, 10, 12, 4, and 3. (5 Marks)

c) The weights of 8 rocks in kilograms is 45, 39, 53, 45, 43, 48, 50, 45. Find the mean weight for the given set of data. (5 Marks)

d) The mean daily wage of 10 workers of a group is Kes 1445. One more worker whose daily wage is Kes1500 has joined the group. Find the mean daily wage of 11 workers of the group. (5Marks)

e) If you roll a fair dice, with sides labelled A, B, C, D, E and F. Find the probability that the dice lands on a vowel. (3 Marks)

f) Determine the probability of getting a sum of 7 when two dice are thrown. (3 Marks)

g) Find the probability that a leap year has 52 Sundays. (4 Marks)

QUESTION TWO

a) State and explain the main advantages of collecting primary data, and how it contributes to the uniqueness of a research study. (2 Marks)

b) Provide an example of a research scenario where observations would be the most effective method for collecting primary data. (2 Marks)

c) Explain the significance of utilizing secondary data in research, and discuss how it differs from primary data in terms of its origin and purpose. (5 Marks)

d) Give an example of a situation where researchers might rely on company records as a source of secondary data. (1 Mark)

e) Explain how qualitative data contributes to a deeper understanding of research topics compared to quantitative data. Provide an example where text-based qualitative data would be particularly valuable. (3 Marks)

f) State and explain the differences between quantitative and qualitative data. (5 Marks)

g) Provide an example of a study where the use of statistics is crucial for drawing meaningful conclusions. (2 Marks)

QUESTION THREE

a) Elaborate on the role of statistical analysis in deriving insights from collected data. Provide an example where statistical methods are applied to validate assumptions. (5 Marks)

b) Discuss the importance of context understanding in data interpretation. Provide a real-world scenario where interpreting data in the context of the problem significantly impacted decision-making. (5 Marks)

c) Compare and contrast inferential analysis with predictive analysis. Illustrate situations where each type of analysis is preferable. (5 Marks)

d) Explain how prescriptive analysis contributes to optimizing outcomes based on analysis results. Provide an example scenario where prescriptive analysis leads to actionable recommendations. (5 Marks)

QUESTION FOUR

a) Define fundamental sampling procedures and provide a real-world example for each: simple random sampling, stratified sampling, and systematic sampling. (3Marks)

b) Discuss the specific scenarios where each fundamental sampling procedure is most effective. (3Marks)

c) Explain the advantages and limitations associated with simple random sampling, stratified sampling, and systematic sampling. (4Marks)

d) Define the Chi-Square test and its primary purpose in statistical analysis. (2Marks)

e) Provide a real-world scenario where the Chi-Square test is appropriate, and explain how it is conducted. (2Marks)

f) Discuss the limitations of the Chi-Square test and alternative tests for categorical data. (4 Marks)

g) Define Analysis of Variance (ANOVA) and its primary purpose in statistical analysis. (2 Marks)